AMENDMENTS TO THE CLAIMS

1 to 136. (Canceled).

137. (Previously Presented) A system for determining a preferred segmentation for at least a first data set and a second data set, wherein each data set includes a plurality of elements and is segmented into a number of groups that is less than or equal to the number of elements, comprising:

(A) one or more input devices for inputting the first and second data sets and association values representing an association between one or more elements of the first data set and one or more elements of the second data set, wherein:

the first data set represents customers;

the second data set represents products; and

the association values represent an association between customers of the first data set and products of the second data set and is indicative of revenue associated with the customers and the products;

(B) a data processing system having a processor operable to:

(i) modify a segmentation of each of the first and second data sets to produce first and second modified data sets having different groups than the first and second data sets;

(ii) calculate group association values based on the association values, the group association values indicating an association between groups of the first modified data set and groups of the second modified data set;

(iii) calculate a metric based on the group association values, the metric representing a measure of an optimization of the segmentations;

(iv) modify the segmentation of at least one of the first and second data sets and recalculating group association values and the metric;

(v) satisfy an optimization criteria by repeating (B)(iv) until the metric reaches a desired value; and

(vi) output the segmentation for the first and second data sets; and

(C) a computer display for outputting the segmentation, wherein outputting the segmentation includes displaying a representation of the group association values on the computer display.

138. (Previously Presented) The system of claim 137, wherein the first and second data sets are categorical data sets.

139-142. (Canceled)

143. (Previously Presented) The system of claim 137, wherein the association values represent profit.

144. (Previously Presented) The system of claim 143, wherein outputting the segmentation includes displaying a representation of the group association values.

145. (Previously Presented) The method of claim 137, wherein (B)(i) comprises aggregating and the number of groups of the first modified data set is less than the number of groups of the first data set.

146. (Previously Presented) The system of claim 137, wherein (B)(i) comprises refining and the number of groups of the first modified data set is greater than the number of groups of the first data set.

147. (Previously Presented) The system of claim 137, wherein (B)(i) comprises both aggregating and refining.

148. (Previously Presented) The system of claim 137, wherein the value of the metric is optimal with respect to a set of admissible functions of the first and second modified data sets.

149. (Previously Presented) The system of claim 137, wherein (B)(iv) comprises determining whether any of the first and second modified data sets has converged.

150. (Previously Presented) The system of claim 137, wherein (B)(iv) comprises determining whether a matrix defined by a cross-space of the first and second modified data sets has converged.

151. (Previously Presented) The system of claim 137, wherein (B)(iv) comprises determining whether a function of a matrix defined by a cross-space of the first and second modified data sets has converged.

152. (Previously Presented) The system of claim 151, wherein (B)(iv) further comprises determining whether an overall association value corresponding to an association between the first and second modified data sets has converged.

153. (Previously Presented) The system of claim 137, wherein (B)(iv) comprises determining whether a permutation signifying an ordering of any of the first and second modified data sets has converged.

154. (Previously Presented) The system of claim 137, wherein a matrix defined by a cross-space of the first and second data sets is populated with live data such that the matrix is dynamic.

155. (Previously Presented) The system of claim 137, wherein (B)(iii) comprises calculating a value of a metric taken on a matrix, wherein the matrix defined by a cross-space formed by the first and second modified data sets and, wherein the metric is a linear arithmetic operation on a plurality of elements of the matrix.

156-157. (Canceled)

158. (Previously Presented) A method of determining and using a preferred segmentation for at least customers in a first data set and products in a second data set, wherein each data set includes a plurality of elements and is segmented into a number of groups that is less than or equal to the number of elements, comprising:

(A) inputting the first and second data sets and association values representing an association between one or more elements of the first data set and one or more elements of the second data set, wherein:

the first data set represents customers;

the second data set represents products; and

the association values represent an association between customers of the first data set and products of the second data set and is indicative of revenue associated with the customers and the products;

(B) modifying a segmentation of each of the first and second data sets to produce first and second modified data sets having different groups than the first and second data sets;

(C) calculating group association values based on the association values, the group association values indicating an association between groups of the first modified data set and groups of the second modified data set;

(D) calculating a metric based on the group association values, the metric representing a measure of an optimization of the segmentations;

(E) iteratively modifying the segmentation of at least one of the first and second data sets and recalculating group association values and the metric until the metric represents an optimization level that equals or exceeds the desired level of optimization;

(F) outputting the segmentation for the first and second data sets; and

(G) offering products to customers based upon the outputted segmentation.

159. (Previously Presented) The method of claim 158, wherein the first and second data sets are input into a computer for processing according to steps (B), (C), (D) and (E), steps (B), (C), (D) and (E) being implemented in software on the computer.

160. (Previously Presented) The method of claim 159, wherein outputting the segmentation includes displaying a representation of the group association values on a computer display.

161. (New) The system of claim 137, wherein the association values are indicative of purchasing frequency of products by customers.

162. (New) The method of claim 158, wherein the association values are indicative of purchasing frequency of products by customers.